City of Lincoln
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Requirements for CAD Submittal of Record Drawings

The following requirements for submittal of CAD data have been prepared for the purpose of incorporating the digital submittal information into the city's Geographic Information System (GIS) base mapping, so that accurate data may become available to emergency responders, construction inspectors, city planners, engineers, and the larger development community.

• CAD file must contain public utility infrastructure and plat information within a single drawing in DWG format. Files in DXF, DWF, or DGN format are not acceptable. Drawing must be "stand-alone" without the necessity of attaching Reference or XREF files, or modifying levels and layers.

• The CAD data is not meant to be printed. As such, it should not be all inclusive of the information displayed on the plan sheets. Objects normally set up in the layout tab ("paper space") for the purposes of plotting plan sheets, such as title blocks, page borders, legends, vicinity maps, and north arrows, should NOT be included in the CAD file. Callout detail boxes also should not be included.

• CAD data must be drawn at full scale (1:1), and oriented to true north.

• The data must be tied to city monumentation data, in real world coordinates, and spatially referenced to the city's GIS projected coordinate system: North American Datum 1983 (NAD83), California State Plane, Zone 2 FIPS 0402; Units: US Feet.

• All polygons must close without overlaps. All lines must be snapped at their endpoints and free of gaps or dangles. Annotation text that breaks the continuity of lines should be shifted out of the way of the line.

• Public utility infrastructure and plat information must be organized into separate layers according to feature type, and drawn as polylines (except for annotation). All layers must be turned on and visible/unfrozen. IMPORTANT: Layer names should be intuitive and descriptive of the objects on that layer. Features must be cleanly segregated into their appropriate layer, and not appear on other unrelated layers. Remnants of lines or points used in the development of the drawing but not representative of actual real-world features (trim lines, transit points, etc) should be removed from the drawing. Existing infrastructure should be on separate layers from proposed infrastructure and should be differentiated as such in layer names (i.e. "EXIST_WATER_MAIN" versus "PROP_WATER_MAIN"). Features that should appear in the drawing on separate layers are listed below. Any additional features not listed are optional and must also be on separate layers with clear, understandable layer names.

Public Infrastructure:

- Fire Hydrants
- Water Mains
- Water Valves

City Hall
Information Technology/GIS Department
600 Sixth Street
Lincoln, CA 95648
(916) 434-3233
www.lincolnca.gov

- Water Meters
- Water annotation: pipe sizes, valve and material types

- Sewer Mains
- Manholes
- Cleanouts
- Sewer annotation: pipe sizes, invert elevations, structure depths, rim elevations, material types

- Storm mains
- Inlets
- Headwalls
- Outfalls
- Other drainage structures (valley gutters, etc)
- Storm annotation: pipe sizes, invert elevations, structure depths, rim elevations, material types

- Buildings

- Paving: edge of pavement, parking area, striping

Plat Information:

- Subdivision boundary
- Parcel lot lines
- Street centerlines
- ROW lines
- Easements, fire lanes
- Plat annotation: street labels, easement types & sizes